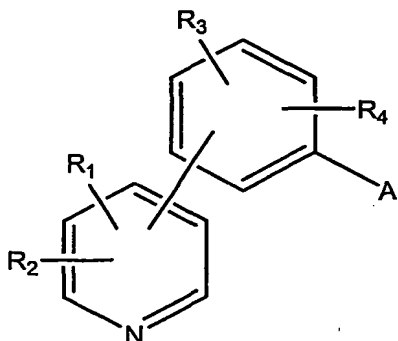


CLAIMS

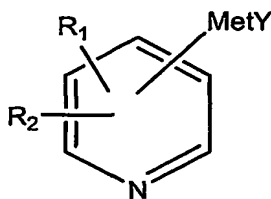
1. A method for the preparation of compounds of formula 1,



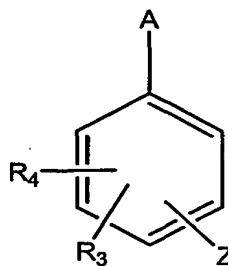
1

in which a solution containing a compound of formula 2 is added dropwise to a solution containing a compound of formula 3

2



3



in which:

- Met represents Mg or Zn,
- Y represents Cl, Br, I or acetoxy,
- Z represents I, Br, Cl, triflate, sulphonate, phosphate,
- R₁, R₂, R₃, R₄, which are the same as one another or different, represent hydrogen, a linear and/or branched C₁-C₄ alkyl, and/or an aryl, and/or a heteroaryl, or R₁ and R₂ and/or R₃ and R₄, taken together, form a C₃-C₈ ring, an aryl and/or a heteroaryl,

- A represents $-\text{COR}_5$, where R_5 represents hydrogen, a linear and/or branched $\text{C}_1\text{-C}_4$ alkyl, and/or an aryl, and/or a heteroaryl, or
 - A represents $-\text{CR}_5(\text{OR}_6)(\text{OR}_7)$ where R_5 has the meaning described above and R_6 and R_7 , which are the same as one another or different, represent a linear and/or branched $\text{C}_1\text{-C}_4$ alkyl, and/or an aryl, and/or a heteroaryl, or R_6 and R_7 , joined together, represent a $\text{C}_1\text{-C}_8$ alkyl or alkenyl, in the presence of catalytic systems based on palladium or nickel.
2. A method according to Claim 1, characterized in that compound 2 is prepared by reaction of the corresponding halogeno-pyridine with a catalytic quantity of alkyl halide, in the presence of an at least stoichiometric quantity of magnesium.
 3. A method according to Claim 2, characterized in that 100 moles of the halogeno-pyridine are reacted with 10-20 moles of alkyl halide and 100-120 moles of magnesium.
 4. A method according to Claim 2, characterized in that the alkyl halide is a $\text{C}_1\text{-C}_8$ alkyl chloride or bromide.
 5. A method according to Claim 4, characterized in that the alkyl halide is ethyl bromide or isopropyl bromide or chloride.
 6. A method according to Claim 1, characterized in that compound 2 is prepared by reaction of the corresponding halogeno-pyridine with an at least stoichiometric quantity of an alkyl-magnesium halide.
 7. A method according to Claim 6, characterized in that the alkyl-magnesium halide is a chloride or a bromide of a $\text{C}_1\text{-C}_8$ alkyl-magnesium salt, preferably an ethyl or isopropyl magnesium salt.
 8. A method according to Claim 1, characterized in that the palladium and/or the nickel are used in quantities of 0.01-10 moles, preferably 0.05-2 moles, per 100 moles of compound 2.
 9. A method according to Claim 1, characterized in that the solvent is an ethereal solvent, preferably THF, 1,2 dimethoxyethane, and/or 1,1-diethoxymethane, or a THF/toluene mixture.
 10. A method according to Claim 1, characterized in that it is performed at a temperature of between 20 and 100°C , preferably between 40 and 80°C .

11. A method according to Claim 1, characterized in that it is performed in the presence of phosphines and/or phosphites.
12. A method according to Claim 11, characterized in that the phosphines and/or phosphites are used in a molar ratio of metal:phosphine/phosphite of between 1:1 and 1:6.
13. A method according to Claim 11, characterized in that the phosphines are selected from triaryl phosphines, diarylalkyl phosphines, trialkyl phosphines, and bidentate phosphines.
14. A method according to Claim 11, characterized in that palladium is used in the form of complexes with phosphines, preferably as $\text{Pd}(\text{PPh}_3)_4$.
15. A method according to Claim 11, characterized in that palladium is used in the salt form, generally in acetate or chloride form, in combination with a phosphine, preferably triphenyl phosphine.
16. A method according to Claim 11, characterized in that nickel is used in the form of complexes with phosphines, preferably bidentate phosphines.
17. A method according to Claim 1, characterized in that it is performed in the presence of zinc salts, preferably ZnCl_2 , ZnBr_2 or $\text{Zn}(\text{OAc})_2$.
18. A method according to Claim 17, characterized in that the zinc salt is used in quantities of 25-120 moles, preferably 35-70 moles, per 100 moles of compound 2.
19. A method according to Claim 18 in which Met is magnesium, characterized in that 0.01-0.1 moles of palladium and 40-70 moles of zinc are used per 100 moles of compound 2.
20. A method according to Claim 17, characterized in that the molar ratio between palladium and compound 2 is less than 1:100.
21. A method according to Claim 1, characterized in that compound 2 is used in a dynamic deficiency relative to the zinc salt.
22. A method according to Claim 1, characterized in that 0.5-1.2 moles, preferably 1 mole, of compound 2 is used per 1 mole of compound 3.
23. A method for the preparation of heterocyclic azahexane derivatives with antiviral action, characterized in that it comprises a method according to Claims 1-22.